July 2022
CBA10654 v1

Bicester Gateway Ltd

ARBORICULTURAL DEVELOPMENT STATEMENT

Site:
Bicester Gateway - Phase 1 B

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The Complete Arboricultural Consultancy

ARBORICULTURAL DEVELOPMENT STATEMENT

Client:	Bicester Gateway Ltd
Site:	Bicester Gateway – Phase 1B
Arboricultural Consultant:	Stefan Rose *BSc (Hons), TechCert (Arbor.A), TechArborA*
Date:	June 2022

SUMMARY

The proposal is for the construction of a business park with associated new entrance, vehicle parking and landscaping at the site of Bicester Gate, Bicester, Oxon.

This Arboricultural Development Statement (ADS) will demonstrate the protection measures for the trees and should be read in association with the Tree Protection Plan CBA10654.02C TPP which identifies tree retention measures. It follows the initial tree survey, implications assessment and on-going discussions to minimise the impact upon the existing tree stock.

The emphasis of the report is predominantly that of preservation and tree protection. It identifies methodologies to provide protection for trees, to ensure their healthy and safe retention during and post development, as guided by BS5837:2012 and current best practice.

Of the 15 (fifteen) individual trees and 6 (six) groups of trees surveyed for this part of the site, five individual trees and sections of four of the groups will need to be removed along with one tree of poor health (categorised as U grade).

CBA Trees believes that the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

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1.0 INTRODUCTION

1.1 This Arboricultural Statement is for the proposed design layout for the construction of Bicester Gateway as shown on Site Layout Plan, number 7081-048 by aja architects.

1.2 The client provided the original site plans and locations of the trees, and these have been the basis for the production of subsequent plans. Whilst CBA Trees has had a limited input in defining the contents of the development plan, it broadly conforms to the requirements of BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"* and current best practice advice.

1.3 Our advice has been sought on the principles of the development in relation to the potential impact on the existing tree stock.

2.0 SCOPE AND PURPOSE OF REPORT

2.1 In line with our written quotation and verbal instructions, information has been compiled in accordance with BS5837:2012 and current best practice advice.

- To undertake a Tree Survey and produce a Root Protection Area Schedule, appended at CB1.
- To produce an AutoCAD compliant Tree Survey Plan that relies on the accuracy of the survey provided by the client (plan CBA100654.01 TSP appended at CB2).
- To undertake an Arboricultural Implications Assessment (AIA) of the proposed development provided by the client to identify which trees will be lost, which can be retained and suggest mitigating build techniques in order to retain trees.
- Based on the above and further on-going discussions, to provide an Arboricultural Development Statement detailing the methodologies for the retention of the tree stock where feasible, in relation to the approved development layout including a Tree Protection Plan CBA100654.02C TPP appended at CB3.

2.2 The advice provided has been formulated without discussion with the main construction contractors who at this stage have not been appointed. Once the main contractors are appointed, amendments to this Method Statement may be required for construction purposes. All amendments will be assessed by the retained arboricultural consultant and approved in writing by Cherwell District Council.

3.0 TREE PRESERVATION ORDER STATUS

3.1 CBA Trees has not been instructed to investigate whether trees on or adjacent to the site are protected by a Tree Preservation Order or located within a Conservation Area. The client is advised to obtain written confirmation from Cherwell District Council to establish the legal status of these trees prior to any works being undertaken, outside the remit of an approved planning application.

4.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT

4.1 Tree Categorisation Method

Category U = Trees in such a condition that any value would be lost within 10 years, or should be removed for reasons of sound arboricultural management. There was 1 (one) tree classified as 'U' grade at the time of surveying (Tree 3).

Note:

"Category U trees are those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years."

Category A = Trees of high quality and value: in such a condition as to make a substantial contribution, (40 years or more is recommended). There are no A grade trees at the time of survey.

Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There were 6 (six) individual trees and 2 (two) groups classified as 'B' grade on the site at the time of surveying (Trees, 1, 4, 6, 7, 9 and 13 plus Groups 2 and 4).

Category C = Trees of low quality and value which might remain for a minimum of 10 years or young trees with stems of less than 150mm diameter. There were 8 (eight) trees and 4 (four) groups classified as 'C' grade on site at the time of surveying (Trees 2, 5, 8, 10, 11, 12, 14 and 15 plus Groups 1, 3, 5 and 6).

Note:

"Trees under these categories are trees that should be a material consideration in the development process; the subcategories are intended to reflect arboricultural, landscape and cultural values respectively.

4.2 Trees

One tree (T3) requires removal for reasons of sound arboricultural management regardless of any development proposals.

The proposed layout (plan reference: Site Layout Plan, number 7081-048 by aja architects) impacts on the following:

Groups

Groups 3, 5 and 6 are infringed by the built form of the proposal through either car parking, footpath links or a new site entrance, the extent sections of these groups will need to be removed to facilitate the construction and provision of the built form.

To allow sufficient ground clearance for installation and subsequent use as parking spaces, the canopies should be raised to 3-4m for Groups 1, 2, 3 and 4. The canopy of Group 4 will also need to be cut back to provide 1.5m separation from branch tips to built form and provide working space for narrow scaffolding.

Low Grade Trees

Parking bays encroach on the recommended RPA's of Trees 14 and 15 to the extent that without special measures root damage will result and is likely to affect their health and stability.

The rooting area of Trees 14 and 15 are impacted such that 'No dig' techniques will be required to minimise root damage. A weight spreading base preventing compaction such as a cellular confinement system (e.g. Cell Web™ or Ground Guard™) and a permeable surface will be required.

Trees 8 and 12 are compromised by the proposed business units and will need to be removed as the pruning that they would require is considered too extensive to be able to retain these trees.

The impact of the proposal on Trees 2 and 10 are not expected to affect the health or amenity of the trees.

Moderate Grade Trees

Tree 1 is impacted by proposed parking bays. This is a moderate grade tree which should be retained and will require 'no dig' techniques along with a weight spreading base such as a cellular confinement system (e.g. Cell Web™ or Ground Guard™) and a permeable surface.

Trees 9 and 13 are compromised by the proposed business units and will need to be removed as the pruning that they would require is considered too extensive to be able to retain these trees.

The impact of the proposal on Trees 4, 6 and 7 are not expected to affect the health or amenity of the trees.

The trees to be retained will require protecting to ensure the roots and rooting environment are not impacted upon by either the development itself or any associated works allowing them to be retained.

The tree constraints on site must be highlighted to the contractors so that they are aware of the space around the trees that needs to be protected.

Where trees/groups are off-site and are under third party ownership, written agreement between the parties will need to be secured prior to these trees being removed.

It is advised that the constraints posed by retained trees are provided to the engineers for the laying out of all services and drainage so that damage to retained trees can be avoided at the design stage. Once proposed service location plans are available, it is advised that arboricultural advice is sought to establish if these will implicate the retained trees.

5.0 PRE-COMMENCEMENT SITE MEETING

5.1 It is recommended that a pre-commencement site meeting should be held prior to any works commencing on site, to agree all approved processes with the arboricultural consultant, the construction personnel and Cherwell District Council. This meeting could be used to formally agree the methods of work, position of site offices, material storage, compounds, parking and tree protection measures prior to commencement of the development and the associated clearance work.

6.0 ADDITIONAL ARBORICULTURAL ADVICE FOR SITE PERSONNEL

6.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet, appended at CB5 shall be issued to all staff at the time of their site induction. Spare copies of this leaflet shall be available in the site office as replacements.

6.2 In order to inform site personnel of the purpose of the barriers, information notices shall be fixed to the barriers at 5m intervals. These notices shall be of all-weather construction and shall be in the form of the specimen provided at appendix CB5 and replaced as and when necessary.

7.0 PRE-DEVELOPMENT TREE WORKS

7.1 All tree works will be undertaken prior to the commencement of site preparation and construction works once any permissions from the landowners of the trees has been received in writing.

7.2 **All permitted or approved tree work** should be carried out in accordance with the British Standard *"Recommendations for Tree Work"* BS3998:2010, by suitably qualified and experienced professional arborists. Under no circumstances shall site personnel undertake any tree pruning operations. All tree surgery works should be carried out prior to the development of the site, and erection of protective barriers.

7.3 If any works are required to retained trees protected by a TPO or within a Conservation Area, prior to full planning permission being granted, written approval must be obtained in advance from Cherwell District Council.

7.4 Consideration should be given to the timing of the proposed tree works to avoid the active growing period of trees. Therefore, all tree work should ideally be carried out during the dormant period from November through to February and then again from June to August.

7.5 Due to the official bird nesting season considered to be from 1st March through to the 31st July (Natural England) depending on weather conditions, consideration must also be given to the potential for nesting birds. Therefore, if tree work is to be carried out within these months the project ecologist must be consulted to:

- Complete or advise on a pre-works survey which needs to be carried out by a suitably competent person. As a general rule, it should be assumed that birds will be nesting in trees, and it is down to contactors to assess, record and confirm that any works carried out in the management of trees and other vegetation has not disturbed actively nesting birds*.

- Ground vegetation, and therefore ground nesting birds, can often be overlooked by tree workers so additional care and controls should be taken when access and egress to the work site may also cause disturbance or damage to a nesting site. This is also true for retained trees on site as the removal of adjacent trees or remedial works on a tree may lead to an established nest being abandoned, exposed to the elements or predation. This action is also a breach of the Act and therefore could lead to prosecution due to the infringement of the Wildlife and Countryside Act 1981 and breaching the European Habitats Directive 1992/Nesting Birds Directive*.

7.6 Although not apparent at the time of the site visit consideration should also be given to the presence of bats, and a full visual assessment should be undertaken before any works are carried out on the trees. Where bats are identified as a serious concern, a bat survey should be undertaken by qualified and trained personnel to identify the needs of the bats (roosts, resting places etc) and no tree works can be carried out until the 'all clear' is given, or a programme of recommendations is received in writing.

7.7 Should additional tree works become apparent during the construction process; written consent will be required from Cherwell District Council prior to these additional works being undertaken.

7.8 All tree works that are required to facilitate the development are detailed within the Tree Works Schedule appended at CB4.

8.0 TREE PROTECTION MEASURES

8.1 Reasons for Tree Protection

The correct and timely installation and maintenance of tree protection measures is the most important action necessary to ensure retained trees, groups, woodlands and hedgerows on and adjacent to the site, remain unaffected by development operations. Exclusion of construction activity from the outset of site preparation will ensure those trees identified for retention are maintained in a safe and healthy condition.

Although aerial parts of the tree, trunk, branches and twigs are obvious, extensive and irreparable damage can be caused to the roots and rooting environment without

any immediately noticeable effect. Severance of large roots in close proximity to the stem can result in the immediate loss of stability and/or rapid death whilst damage to more distal parts of the root system or rooting environment will result in a slow decline in tree health over a period of several years, resulting in premature loss.

8.2 *Damage to Trunks Stems and Branches*

Impact damage to the crown of the tree can result in the loss of leaves which produce starch and sugars (carbohydrates) and a reduction in the visual amenity which established trees provide. These carbohydrates are necessary for maintaining all biological functions within the tree, including growth, reproduction and defence. Extensive crown damage will reduce the tree's ability to produce carbohydrates and increase physiological stress on the tree.

The bark protects the underlying vascular tissue and cells responsible for growth from drying, disease and decay. Bark is loosely attached to the underlying tissue and can be easily damaged or removed through direct contact. It is particularly susceptible to damage when trees are young or in early spring following the onset of growth.

Impact damage which removes bark, results in dysfunction of the underlying vascular tissue preventing transport of water, mineral nutrients and carbohydrates to parts of the tree to which they are connected. If damage to the bark extends around the whole circumference, the root, branch or trunk the section beyond the damage will be killed.

Branches which are either broken or are torn from the trunk of the tree, create wounds which are prone to colonization by wood destroying organisms. These organisms cause internal decay, which result in future tree failure and premature loss.

8.3 *Purpose of Tree Protection*

All site operations will be planned, implemented and supervised so as to prevent the following:

- Unplanned root severance
- Damage to the bark, branches and trunks
- Compaction of the soil within the Construction Exclusion Zone
- Alterations in soil level
- Soil contamination by phytotoxic materials such as herbicides, petrol, oils, diesel, cement and concrete washings or other construction additives

8.4 *Tree Protection*

Before starting any site preparation, ground or construction works, including material storage, tree protection will be installed in accordance with Tree Protection Plan CBA10654.02C TPP (appended at CB3). This will occur immediately following the completion of tree works and prior to any site preparation works starting.

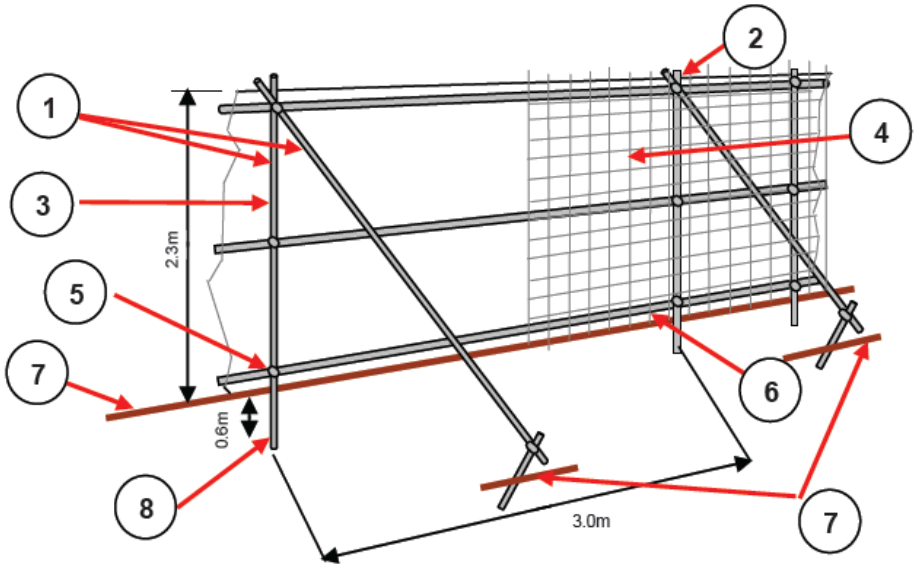
A copy of the Tree Protection Plan will be displayed in the site office and canteen as a point of reference for all site operatives.

8.5 *Standard Protective Barriers*

The following protective barrier as indicated on Tree Protection Plan CBA10654.02C TPP. The barrier is to comprise of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps.

In accordance with Section 6.2.2.4 of BS5837:2012, weldmesh panels on rubber or concrete feet are not resistant to impact and will not be used for tree protection purposes.

Figure 1: Protective Barrier



1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Weldmesh wired to the uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of barriers to avoid easy dismantling
7. Ground level
8. Approximately 0.6m driven into the ground

Example of protective barriers:

8.6 Ground Protection

Trees 1, 14 and 15 require construction activity within the identified root protection area. Ground protection will be implemented for these trees before site works commence and removed as works progress and start to construction the car parking bays as per the Tree Protection Plan CBA10654.02C TPP.

Ground protection will consist of a suspended walkway of 18mm exterior grade Plyboard or OSB board supported on 75 x 50mm bearers, or alternatively track mats or steel road plates can be used.

A compressible layer will be incorporated into the design beneath the sheet material to minimise compaction of the rooting environment. This layer could consist of a 100mm thick layer of composted wood chip or preparatory neoprene mats.

9.0 SERVICES

9.1 Service locations have not been provided at the time of compiling this report. The routes and the working space to install drainage and utilities must be positioned well outside the root protection areas of all retained trees.

10.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

10.1 Care shall be taken when planning site operations, to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact could result in serious damage to them, and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees, will be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

11.0 VEHICULAR MOVEMENTS

11.1 There should be minimal vehicular movement in the potential rooting zone outside the tree protection measures as identified on Plan CBA10654.02C TPP.

11.2 It is not anticipated that there will be a need for excess vehicular movement near the retained trees, given that a new access, road network and car parking will be created and that the trees are located around the perimeter of the site.

11.3 Due to the site layout, access within the CEZ of Trees 1, 14 and 15 will be required for the construction of car parking bays; these areas will only be suitable for access subject to the implementation and maintenance of all tree protection measures identified on Plan CBA10654.02C TPP.

12.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

12.1 The locations of temporary offices, toilets and material storage compounds shall be agreed in writing with Cherwell District Council prior to the commencement of works on site and will remain in only those agreed locations throughout the construction phases. If an alternative location is required, this must be agreed in writing with Cherwell District Council. This will also include the delivery storage and movement of all essential facilities, as well as aspects such as temporary contractor vehicle parking and site location of chemical mixing (e.g. concrete). All such locations will be outside of the RPAs and avoid areas where 'run off' of chemicals may flow into RPAs.

12.2 ***Site Huts***

All site huts are to be sited well outside the RPA's of retained trees.

12.3 ***Material Storage***

This shall be accommodated outside of the RPAs, particularly to avoid harmful spillages of fuel, or phytotoxic substances that may damage the health of retained trees.

13.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CONSTRUCTION EXCLUSION ZONE (CEZ)

13.1 Inside the CEZ formed by the protective barrier and ground protection measures, the following prohibitions shall apply:

- No construction activity will occur within the CEZ unless otherwise stated in this report or agreed in writing with Cherwell District Council prior to the specific activity taking place.

13.2 In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:

- Materials which will contaminate the soil e.g. concrete mixing, diesel oil and vehicle washings, shall not be discharged within 10 metres of the tree stem. This should take into consideration the topography of the site and slopes, to avoid materials such as concrete washings running towards trees.
- Fires shall not be lit in a position where their flames can extend to within 5 metres of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, telephone cables or other services shall not be attached to any part of the tree (see appendix CB5 Common Causes of Damage During Construction Works).

14.0 UTILITY SERVICE CONNECTIONS

14.1 Details of service location proposals have not been forwarded to CBA Trees at the time of compiling this assessment. It is however assumed, given the location of the trees to be retained, that services will be installed outside the root protection areas of retained trees, and connected to the existing where practicable, this will avoid disturbance of tree roots and ensure their healthy retention.

15.0 INSTALLATION OF HARD SURFACING IN CLOSE PROXIMITY TO RETAINED TREES

15.1 Tree protection Plan CBA10654.02C TPP indicates where no-dig hard surfaces are to be installed within the RPA of retained Trees 1, 14 and 15. These surfaces must comply with the following requirements:

- The proposed hard surface will consider site-specific factors and will be designed in accordance with advice from a structural engineer drainage engineer and arboricultural consultant. This will result in a design which is fit for purpose, adequate for the task and sympathetic to the biological requirements of the trees.
- Finished levels will need to be constructed on the existing ground levels once loose vegetative materials to a maximum depth of 100mm have been removed.
- If hollows in the existing ground are to be raised, this should be achieved with a granular material which does not inhibit gaseous exchange (such as no-fines gravel, washed aggregate or cobbles).
- Sub-base will consist of a non-binding, no fines granular material which does not inhibit water percolation or gaseous exchange, and this shall be contained within a cellular confinement system to avoid the need for a separate subbase.
- If a substantial area of fill is to be installed, provision will be made for the installation of irrigation and aeration system within the RPA of retained trees. Distance between pipes will not exceed 400mm, irrigation pipes will be connected to the surface water drainage system. Aeration pipes will be installed in between and will be protected by paving mounted grills.
- Depending on the load-bearing capacity of the soil determined through engineering testing, and the expected loads to be exerted on the soil, it may be necessary to incorporate a load suspension layer such as a 3-dimensional cellular confinement system. This layer must allow gaseous exchange both vertically and horizontally. Any load suspension system should only be used in accordance with the manufacturer's guidelines, and its installation should comply with any relevant health and safety guidance. CBA Trees can provide further information relating to appropriate systems on request.
- The parking area will be finished with a surface treatment which is permeable to gaseous and water movements.

- If water logging is likely to be a concern on a site, any proposed no-dig hard surfacing should be designed to direct water away from the base of the tree or provision made for the inclusion of surface water drainage.

15.2 Wearing courses which could be installed over the granular material include:

- Washed Gravel – This is particularly useful as it retains its porosity (unless excessively consolidated), and can accommodate irregular shapes and changes in level. It is rarely suitable where vehicle or heavy pedestrian access is expected. Any gravel should have a low fines content to avoid low permeability resulting from consolidation.

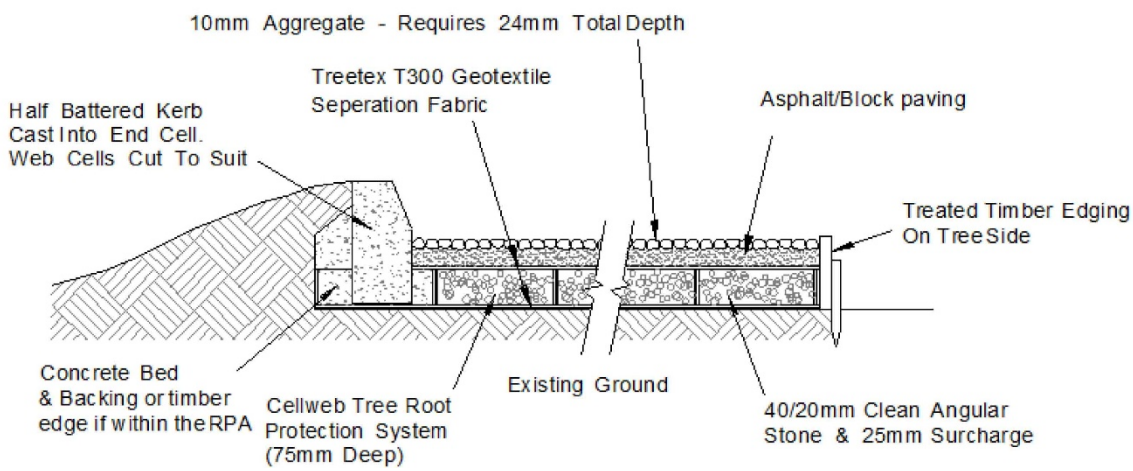
- Paving Slabs and Pavers – These can be installed with infiltration spaces between the slabs, and should be installed dry-jointed and on a sharp sand-foundation.

- Bitumen Paving – If implemented, this must be of a porous construction however, such surfaces will eventually become clogged with silt, and provision must be made for regular vacuum sweeping within the future maintenance of the surface or be installed in a similar way to the in-situ concrete, or be limited to less than 20% of the RPA.

- Other surfaces may be used but the final design of any no-dig hard surface should always be in agreement with a structural engineer and the retained arboriculturist.

Where edge supports are required, they will be designed so as not to require any excavation of the existing soil surface, and should be in the form of either wooden or other edging materials, approved by a structural engineer and the retained arboriculturist. These edgings should be pinned in place, and the location of the pins should seek to avoid exposed surface or structural roots exceeding 25mm diameter.

Figure 2: Showing an example of a 3d Cellualr confinement system



16.0 SOFT LANDSCAPING WORKS

16.1 All soft landscaping works within the development area will be in accordance with the approved landscape plan, and any specification of such works approved by the local planning authority.

16.2 All landscaping will accord with following requirements:

- Landscaping works are to be carried out after the main phase of construction has been completed or as phases of the development are completed. At this stage, it may be necessary to alter the line of/remove protective barriers in order to facilitate the landscaping works.
- The construction exclusion zone will remain off limits for all site plant and machinery unless fit for purpose ground protection is installed. Pedestrian traffic must be kept to an absolute minimum only permitted for the ground preparation and landscape installation works
- The landscaping works will need to be undertaken in such a way as to avoid level changes, deep digging or mechanical rotovating. Excavation of planting pits with the RPA can cause serious harm the root system of retained trees. Planting pits within the RPA of retained trees will be excavated by hand to avoid roots greater than 25mm and masses of smaller roots.

Figure 3:

Root severance as a result of planting within RPA

Planting Trees and Shrubs. Watson G. W. and Himelick E. B. 1997

- If any planting pits are required within the CEZ of retained trees, these will be dug by hand and with care avoiding roots greater than 25mm diameter or masses of smaller roots.

16.3 Installation of turf within the CEZ will require that:

- In all cases, existing vegetation will be removed to ground level by hand following treatment with a suitable systemic herbicide which is not toxic to existing retained trees. This prevents the build-up of methane formed as part of the composition process.

- If stumps are to be removed within areas of retained vegetation, the stumps will be ground out to 300mm below ground level and resulting holes filled with sharp horticultural sand to provide a stable base for laying of the new turf

16.4 Any surface mulch will consist of well-composted material such as bark or wood chips. This is necessary to avoid potential nutrient loss from the soil, such as Nitrogen, as the mulch breaks down, as nutrient loss can be detrimental to the health and longevity of retained trees.

16.5 All work specified in the approved landscaping scheme shall be carried out before the end of the first planting and seeding season, following the occupation of any completed part of the development.

16.6 Any existing tree shown to be retained, or trees and shrubs to be planted as part of the landscaping scheme that are removed, die, become severely damaged beyond recovery or diseased within 2-5 years of the completion of the development (dependent on planning conditions), shall be replaced with trees or shrubs of appropriate size and species that complement the existing tree stock, within the next planting season. Where the trees in question are protected by planning controls, the local planning authority should be informed and necessary arrangements made prior to such work.

17.0 SITE MONITORING AND SUPERVISION

17.1 It is recommended that on-going arboricultural site monitoring takes place for the duration of the proposed development, to be carried out by a qualified and experienced arboriculturist at pre-determined and agreed time intervals, and governed by the type, timing, location and intensity of site works. Cherwell District Council to Condition site monitoring if required.

17.2 If Conditioned, it will take the form of regular inspections (to be agreed, but at least one visit per month during the construction phase of the development is advised, together with additional visits to supervise works with the CEZ of retained tree/s), the aim of the visits is to maintain on-going liaison with all personnel involved in the site development, Cherwell District Council and its Tree Officer.

17.3 Any defects requiring rectification shall be notified to the Contractor/Site Manager and the client.

17.4 In addition, a site logbook for tree protection measures is kept to record all stages of the development from the erection of the protective barriers, right through to the completion of the project. This will be made available to the arboricultural consultant and Cherwell District Council if required, to show evidence of continuous site monitoring.

Example pro-forma:

Date	Activity	Checked	Comments/ damage noted	By whom	Signed	Action taken
	Erection of protective barriers					
	Inspection of protective barriers					

17.5 The Cherwell District Council Tree Officer (or appropriate representative) will have agreed access to the site, and will report on any problem areas directly to the developer's retained arboriculturist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure the implementation.

18.0 REPORT DAMAGE TO TREES AND TREE PROTECTION BARRIERS

18.1 Should any damage be caused to trees noted for retention, either by the above works or as the result of any other action, the damage should be reported to the site supervisor immediately. The site supervisor shall report up the chain of responsibility to the retained consultant arboriculturist, or in the absence of such an appointment, to an appropriately qualified arboriculturist, to enable remedial measures to be implemented as necessary and as agreed with Cherwell District Council.

18.2 Should protective barriers become damaged so as to impair its function in protecting trees, all work shall cease in the vicinity of the damage, until the fence has been returned to standard.

19.0 CONSTRUCTION WORK TIMINGS

19.1 CBA Trees has not been provided with a programme of works. This is for the client and contractor to agree as required by Cherwell District Council.

20.0 REMOVAL OF PROTECTIVE BARRIERS

20.1 When the development phase is complete, all drainage and service runs are in place, all site machinery has been removed and any landscaping for the principal area of the site has been implemented, the protective barriers will be dismantled.

20.2 This fence dismantling must be undertaken with great care and will need to be supervised to avoid heavy machinery being used within the root protection areas. Hoarding, scaffolding and other barrier materials will need to be removed from site immediately.

21.0 COMPLETION MEETING

21.1 Upon completion of all the works specified above, and in line with procedures also specified, the retained arboricultural consultant will invite Cherwell District Council Tree Officer to meet on site, to discuss the project and to agree on any remedial works required.

22.0 CONCLUSION

22.1 The proposal for the construction of a business park with associated new entrance, vehicle parking and landscaping at the site of Bicester Gateway, Bicester, Oxon has been assessed broadly in accordance with BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"*.

22.2 It is our opinion that the trees identified for retention can be afforded due respect and provided adequate working methodologies, construction and protection measures are adhered to, ensuring their safe and healthy retention during the development process.

22.3 Trees 3, 5, 8, 9, 12 and 13 plus sections of Groups 2, 3, 5 and 6 will require removal. The remaining trees and groups are to be retained as part of the development proposal.

22.4 It is our opinion that the loss of the trees and sections of groups will not have a detrimental effect on the local visual amenity or significantly alter the visual treed character of the local area, a landscaping scheme that includes quality trees, selected to suit the site conditions and the space available, should be implemented.

22.5 Provided the recommendations included within this report are strictly adhered to, CBA Trees believes the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

23.0 CONTACT LIST

23.1 It is suggested that points of contact and lines of communication are established prior to commencement of the works on site including:

- Arboricultural Consultant
- Project Architect
- Highways Engineer
- Structural Engineer
- Drainage Engineer
- Landscape Architects
- Cherwell District Council's Tree Officer
- Cherwell District Council's Planning Case Officer
- Site Supervisor and Foreman

23.2 It is advised that the site supervisor establishes their own listing of contact details at the pre-start site meeting and displays this in their office for general use as necessary.

24.0 BIBLIOGRAPHY

- British Standard 5837:2012 –
  "Trees in Relation to Design, Demolition and Construction - Recommendations"
- British Standard 3998:2010 –
  "Recommendations for Tree Work"
- National Joint Utilities Group Publication Volume 4 –
  "Guidelines for the planning, installation and maintenance of utility services in proximity to trees"
- Wildlife and Countryside Act 1981
- Conservation of Habitats and Species Regulations 2010 (as amended)
- Town and Country Planning Acts

CB1

The Professional Arboricultural Consultancy

TREE SURVEY NOTES

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2012 and current arboricultural best practice.

- Each tree has been numbered and, where instructed, for future identification on site, has been tagged using small durable metal or plastic tags.
- Due to variations of existing ground levels through the site, height dimensions are estimated and are given in metres. Accurate heights, measured with the aid of optical instruments can be provided where instructed.
- Trunk/stem diameters are measured in mm at 1.5 metres above ground level, using a standard measuring tape as defined by British Standards, unless otherwise stated.
- Estimated branch spread is taken in metres from the centre of the trunk, at the four cardinal points of a compass, to achieve an accurate representation of the crown shape which will be recorded on the tree survey plan.
- An assessment of a tree's age classification is made in terms of its maturity within the site's landscape and defined as:

  Y = young trees
  SM = semi-mature trees
  EM = early mature trees
  M = mature trees
  OM = over-mature trees

- An assessment of a tree's physiological condition is defined as:

  Good = fully functioning biological system showing average vitality i.e. normal bud growth, leaf size, crown density and wound closure
  Fair = fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure
  Poor = a biological system with limited functionality showing significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure
  Dead = dead

- An assessment of a tree's structural condition is defined as:

  Good = no significant structural defects
  Fair = structural defects which could be alleviated through remedial tree surgery or management practices
  Poor = structural defects which cannot be alleviated through tree surgery or management practices
  Dead = dead

- An assessment of a tree's future life expectancy is defined as: **<10, 10+, 20+ or 40+ years.**

Categorisation of Trees

The category for each tree is assessed using the recommendations of BS5837:2012. The assessment has not considered any site-specific development proposals, but will have considered any changes on or off-site which may have an effect on the conditions surrounding the surveyed trees.

The trees have been classified into one of the following categories (and one or more sub-categories [this will however not increase the value of the tree]) and are indicated on the associated drawings by colours as indicated.

Category U				Identification colour on plan
Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality			**DARK RED**
Category A	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands, of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	**LIGHT GREEN**
Category B	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are down-graded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation value or other cultural value	**MID BLUE**
Category C	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	**GREY**

Clients are advised that Tree Surveys are a basic data collection exercise and record of tree condition at the time of survey. This will identify any visible signs of ill-health or major defects, advising a further detailed investigation where appropriate. This will most often take the form of a request for either "*full ground level inspection*" or "*climbing inspection required*". There may also be a further reference to the need for "*decay detection equipment*" to aid diagnosis. A tree survey does not include a comprehensive schedule or specification of remedial tree works, but may contain a guide to the work which might be undertaken by a prudent tree owner, purely for reasons of health and safety.

A Tree Survey should not be confused with a Tree Inspection or Arboricultural Implication Assessment, which are totally separate exercises.

	BS5837:2012 TREE SURVEY REPORT	
	Site:	Bicester Gateway, Phase 1a & 1b
	Date:	15 September 2016
	Consultant:	Mark Harrison *M.Arbor.A, Nat.Dip.Arb*
	Tagged:	No

Notes:

1. It may be advised that some trees should have the ivy removed to enable a re-survey to be carried out. This would also alleviate the tree from becoming suppressed; carrying additional weight that increases the chance of windthrow due to a larger dense crown area; and only receiving restricted light. Unless otherwise stated, in order to prevent regrowth, it is only necessary to remove a 300mm section of ivy and clear around the base.
2. It may be advised that it was only possible to estimate the diameter of some trees because of ivy smothering, dense vegetation, or trees located off-site with no access.
3. The estimated remaining contribution in years, and the tree grading category have been calculated for the current situation and may alter where further investigation works are advised.
4. Some trees or groups may have been given an interim grade. The reason for the interim grading is addressed in the timescales given as this may have a bearing on health and safety and/or any development proposals.
5. Tree Groups have been assessed with estimated and representative data.
6. This is not a Tree Works Schedule. Any preliminary management recommendations are listed in the interests of health and safety and should be carried out by a prudent tree owner.
7. Any management recommendations are suggested for reasons of health and safety only, regardless of development proposals at this stage. However, the defects requiring remedial tree surgery are by their very nature potential wildlife habitats, including protected species which needs consideration prior to any tree surgery works commencing.
8. a) At this stage the Root Protection Area (RPA) information is for your guidance and ongoing discussion purposes only as it assumes that all but the 'U' grade trees will be retained, which may not be the case.
   b) For all single stem trees with a stem diameter greater than 1250mm, and multi-stem trees with a stem diameter greater than 1500mm, the calculated RPA has been capped at 707m2 in accordance with Section 4.6.1 of BS5837.2012.

TREE PRESERVATION ORDER/CONSERVATION AREA:

CBA Trees has not been instructed to investigate whether trees on or adjacent to the site are protected by a Tree Preservation Order or located within a Conservation Area.

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
T1	Ash *Fraxinus excelsior*	20	S	650	191	7.8	N 9 E 8 S 8 W 9	N 3 E 6 S 8 W 9	M	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	B1
T2	Goat Willow *Salix caprea*	12	S	350	55	4.2	N 4 E 4 S 3 W 4	N 3 E 4 S 3 W 4	EM	Fair	Structural Condition - Fair No visible defects	None required at time of survey	20+	C1
T3	Ash *Fraxinus excelsior*	22	S	800	-	-	N 6 E 6 S 6 W 6.5	N 5 E 7 S 6 W 6.5	M	Poor	Structural Condition - Poor Cavity and decay at first major fork 3m east Inonotus hispidus at wound on main stem at first major fork 3m east	Advise removal	20+	U
T4	Ash *Fraxinus excelsior*	20	S	330	49	4.0	N 4 E 4 S 4 W 4	N 5 E 3 S 4 W 4	EM	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	B1
T5	Ash *Fraxinus excelsior*	22	MS	300 200 180	74	4.8	N 5 E 5.5 S 5 W 5.5	N 18 E 5 S 5 W 5.5	EM	Fair	Structural Condition - Fair Narrow fork with included bark at the base	None required at time of survey	10+	C1
T6	Ash *Fraxinus excelsior*	16	S	250	28	3.0	N 4.5 E 4 S 3 W 4	N 3 E 3 S 3 W 4	EM	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	B2
T7	Ash *Fraxinus excelsior*	16	MS	150 150 300	61	4.4	N 2.5 E 5 S 6 W 5	N 8 E 4 S 6 W 5	EM	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	B2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
T8	Ash *Fraxinus excelsior*	8	S	250	28	3.0	N 0 E 4 S 5 W 2	N - E 1.5 S 5 W 2	EM	Poor	Structural Condition - Poor No visible defects	None required at time of survey	10+	C1
T9	Ash *Fraxinus excelsior*	15	S	300	41	3.6	N 3.5 E 3.5 S 4.5 W 4	N 2 E 2 S 4.5 W 4	EM	Fair	Structural Condition - Fair Access restricted - dimensions estimated	None required at time of survey	40+	B2
T10	Ash *Fraxinus excelsior*	15	S	400	72	4.8	N 4 E 3.5 S 4 W 4	N 5 E 3 S 4 W 4	EM	Fair	Structural Condition - Fair Access restricted - dimensions estimated	None required at time of survey	40+	C1
T11	Pedunculate Oak *Quercus robur*	15	S	210	20	2.5	N 1 E 3.5 S 2 W 1	N 5 E 5 S 2 W 1	EM	Fair	Structural Condition - Fair Asymmetrical canopy biased to south east	None required at time of survey	40+	C1
T12	Pedunculate Oak *Quercus robur*	12	S	210	20	2.5	N 1 E 3.5 S 3 W 2.5	N 2 E 2 S 3 W 2.5	EM	Fair	Structural Condition - Fair Asymmetrical canopy biased to south east Previously cut to 1.2m where crown now breaks	None required at time of survey	40+	C1
T13	Pedunculate Oak *Quercus robur*	16	S	210	20	2.5	N 5 E 4.5 S 3 W 4.5	N 6 E 2 S 3 W 4.5	EM	Fair	Structural Condition - Fair Bifurcated at 1m above ground level	None required at time of survey	40+	B1
T14	Pedunculate Oak *Quercus robur*	16	S	390	69	4.7	N 1 E 4.5 S 6 W 4	N - E 2 S 6 W 4	EM	Fair	Structural Condition - Fair Recently crown lifted to 4m above ground level	None required at time of survey	40+	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
T15	Ash *Fraxinus excelsior*	19	S	200	18	2.4	N 3 E 2.5 S 4.5 W 4	N 4 E 16 S 4.5 W 4	EM	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	C1
T16	Field Maple *Acer campestre*	15	MS	200 260	49	3.9	N 2 E 3.5 S 4 W 4	N 8 E 4 S 4 W 4	EM	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	C1
T17	Ash *Fraxinus excelsior*	18	S	250	28	3.0	N 5 E 4 S 5 W 4	N 5 E 5 S 5 W 4	EM	Fair	Structural Condition - Fair Old coppice stool	None required at time of survey	40+	C1
T18	Ash *Fraxinus excelsior*	20	S	420	80	5.0	N 5 E 4 S 5 W 4	N 5 E 5 S 5 W 4	EM	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	B1
T19	Ash *Fraxinus excelsior*	16(3)	MS	200 200 200	54	4.2	N 3.5 E 3.5 S 3.5 W 3.5	N 4 E 4 S 3.5 W 3.5	EM	Fair	Structural Condition - Fair Narrow forks with included bark at base	None required at time of survey	40+	C1
T20	Ash *Fraxinus excelsior*	16(3)	MS	100 120 150	21	2.6	N 4 E 3.5 S 2 W 3	N 5 E 5 S 2 W 3	EM	Fair	Structural Condition - Fair Old coppice stool with two stems removed resulting in large wounds at base Narrow forks with included bark at base	None required at time of survey	20+	C1
T21	Ash *Fraxinus excelsior*	14(5)	S	150	10	1.8	N 3.5 E 3 S 2 W 2.5	N 5 E 4 S 2 W 2.5	EM	Poor	Structural Condition - Poor Old coppice stool with two stems removed resulting in large wounds at base	None required at time of survey	10+	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
T22	Sycamore *Acer pseudoplatanus*	19	S	380	65	4.6	N 4 E 3 S 5 W 4	N 4 E 7 S 5 W 4	M	Fair	Structural Condition - Fair Basal growth Narrow fork with included bark at 4m	None required at time of survey	40+	C1
T23	Ash *Fraxinus excelsior*	19	MS	400 230 230	96	5.5	N 6 E 5 S 5.5 W 2.5	N 6 E 3 S 5.5 W 2.5	M	Fair	Structural Condition - Fair Narrow fork with included bark at base	None required at time of survey	40+	C1
T24	Ash *Fraxinus excelsior*	23	MS	190 300 350 250	141	6.7	N 4 E 6 S 5 W 4	N 15 E 15 S 5 W 4	M	Poor	Structural Condition - Poor Previously laid as part of the hedge, now outgrown	None required at time of survey	20+	C1
T25	Ash *Fraxinus excelsior*	20	S	250	28	3.0	N 6.5 E 4.5 S 3 W 3	N 15 E 15 S 3 W 3	M	Fair	Structural Condition - Fair Old coppice stool - recently removed stems	None required at time of survey	40+	C1
T26	Ash *Fraxinus excelsior*	17	S	300	41	3.6	N 4 E 4 S 4 W 4	N 4 E 4 S 4 W 4	M	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	C1
T27	Ash *Fraxinus excelsior*	17	S	200	18	2.4	N 4 E 3.5 S 4.5 W 4	N 12 E 14 S 4.5 W 4	M	Fair	Structural Condition - Fair Old coppice stool	None required at time of survey	40+	C1
T28	Ash *Fraxinus excelsior*	17	S	150	10	1.8	N 6 E 4 S 3.5 W 4.5	N 5 E 5 S 3.5 W 4.5	M	Poor	Structural Condition - Poor Previously laid as part of the hedge, now outgrown	None required at time of survey	10+	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
T29	Ash *Fraxinus excelsior*	15	MS	320 250	75	4.9	N 4 E 4 S 4 W 4	N 7 E 7 S 4 W 4	M	Fair	Structural Condition - Fair No visible defects	None required at time of survey	40+	B1
T30	Ash *Fraxinus excelsior*	18	S	600	163	7.2	N 2 E 5 S 7 W 5	N 15 E 4 S 7 W 5	M	Fair	Structural Condition - Fair Previously laid as part of the hedge, now outgrown	None required at time of survey	20+	C1
T31	Ash *Fraxinus excelsior*	18	S	200	18	2.4	N 6 E 4 S 3 W 4.5	N 6 E 4 S 3 W 4.5	M	Fair	Structural Condition - Fair Old coppice stool	None required at time of survey	20+	C1
T32	Ash *Fraxinus excelsior*	18	S	500	113	6.0	N 4 E 5 S 4 W 4	N 6 E 6 S 4 W 4	M	Fair	Structural Condition - Fair Old coppice stool	None required at time of survey	20+	C1
T33	Ash *Fraxinus excelsior*	16	S	200	18	2.4	N 2 E 4 S 4 W 3.5	N - E 3 S 4 W 3.5	EM	Fair	Structural Condition - Fair Previously cut to 1.2m above ground level and recently crown lifted	None required at time of survey	40+	C1
G1	Ash Field Maple Hawthorn	12	S	200	18	2.4	N - E - S - W -	N - E - S - W -	EM	Fair	Structural Condition - Fair Informal boundary hedge adjacent to ditch	None required at time of survey	40+	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
G2	Field Maple Dogwood Hawthorn Blackthorn Goat Willow Crab Apple Elder	12	S	200	18	2.4	N - E - S - W -	N - E - S - W -	M	Fair	Structural Condition - Fair Informal boundary hedge adjacent to ditch Historically layered resulting in multi stemmed Ash Individuals are of low to average quality, categorised C, but provides high landscape value as a whole hence B group category	None required at time of survey	40+	B2
G3	Hawthorn Goat Willow	12	S	150	10	1.8	N - E - S - W -	N - E - S - W -	M	Poor	Structural Condition - Poor Informal boundary hedge adjacent to ditch Predominantly collapsing Goat Willow	None required at time of survey	<10	C1
G4	Field Maple Dogwood Hawthorn Blackthorn Goat Willow Crab Apple	12	S	200	18	2.4	N - E - S - W -	N - E - S - W -	M	Fair	Structural Condition - Fair Previously maintatained boudary hedge now outgrown, forming an informal boundary hedge adjacent to ditch Provides screening from A41	None required at time of survey	40+	B2
G5	Various species	10	S	100	5	1.2	N - E - S - W -	N - E - S - W -	M	Fair	Structural Condition - Fair Area of scrub and brambles	None required at time of survey	40+	C1
G6	Various species	15	S	100	5	1.2	N - E - S - W -	N - E - S - W -	EM	Fair	Structural Condition - Fair Dense thicket of young Ash, Thorn, Elm.	None required at time of survey	40+	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
G7	Field Maple Dogwood Hawthorn Blackthorn Goat Willow Crab Apple Elder	12	S	200	18	2.4	N - E - S - W -	N - E - S - W -	M	Fair	Structural Condition - Fair Informal boundary hedge adjacent to ditch Historically layered Individuals are of low to average quality, categorised C, but provides high landscape value as a whole hence B group category	None required at time of survey	40+	B2
G8	Field Maple Dogwood Hawthorn Blackthorn Goat Willow Crab Apple Elder	12(2)	S	200	18	2.4	N - E - S - W -	N - E - S - W -	M	Fair	Structural Condition - Fair Informal boundary hedge adjacent to ditch Historically layered Individuals are of low to average quality, categorised C, but provides high landscape value as a whole hence B group category	None required at time of survey	40+	B2
G9	Blackthorn Field Maple Hawthorn	12	S	200	18	2.4	N - E - S - W -	N - E - S - W -	M	Fair	Structural Condition - Fair Young dense thicket	None required at time of survey	40+	C1
G10	Hawthorn	12	S	200	18	2.4	N - E - S - W -	N - E - S - W -	M	Fair	Structural Condition - Fair Young boundary hedge of predominantly Hawthorn Provides screening from A41	None required at time of survey	40+	B2
Stump	Goat Willow	-	S	300	-	-	-	-	Stump	-	-	-	-	-
Stump	Goat Willow	-	S	300	-	-	-	-	Stump	-	-	-	-	-

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m^2)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
Stump	Goat Willow	-	S	300	-	-	-	-	Stump	-	-	-	-	-
Stump	Goat Willow	-	S	300	-	-	-	-	Stump	-	-	-	-	-

CB2

CBA Trees

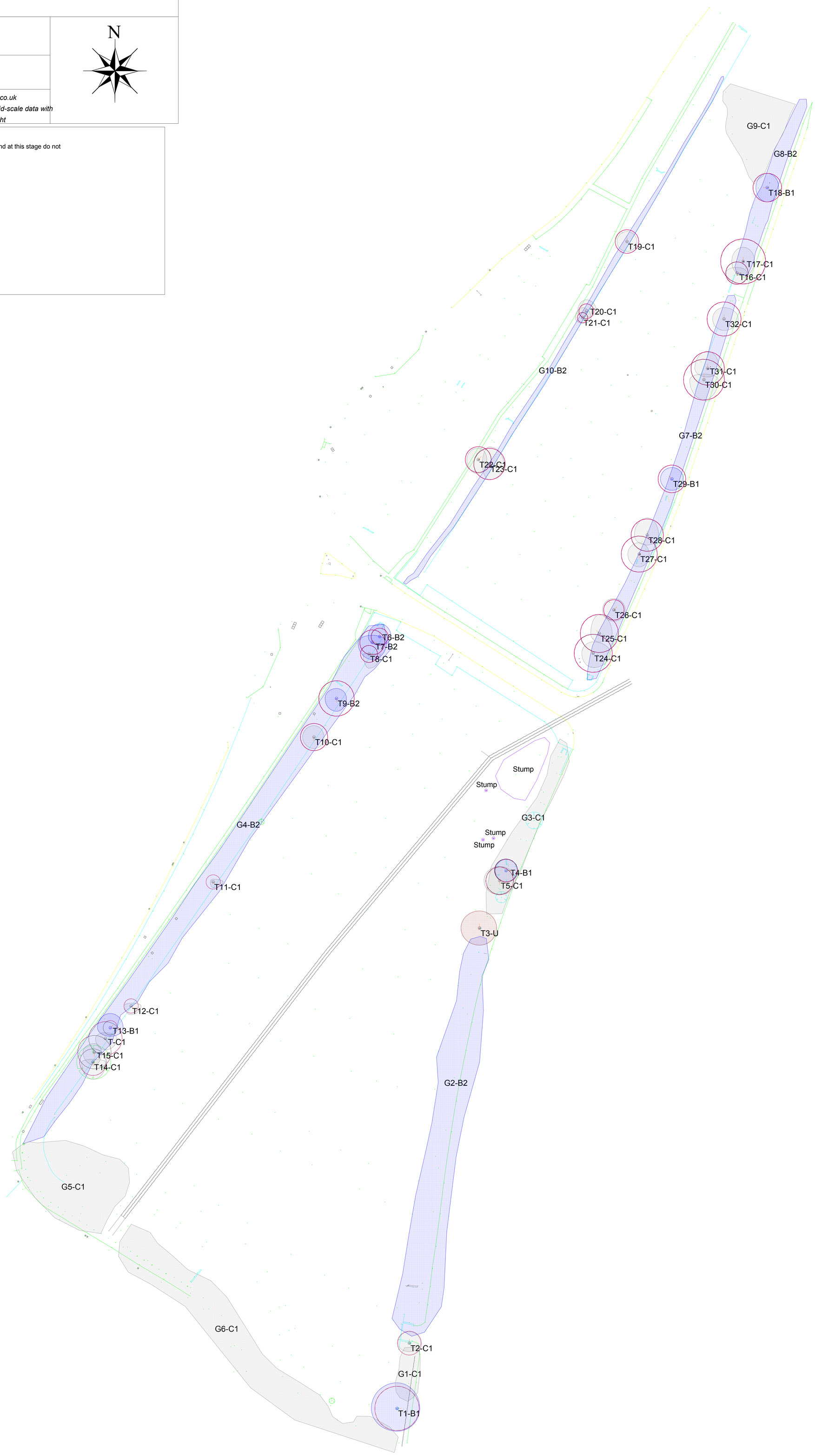
Russell House
Unit 20 Chalcroft Business Park
Burnetts Lane, West End
Southampton, SO30 2PA
Tel: 02380 986229 Email: info@cbatrees.co.uk
Website: www.cbatrees.co.uk

10654
Bicester Gateway, Phase 1a and 1b
Tree Survey Plan

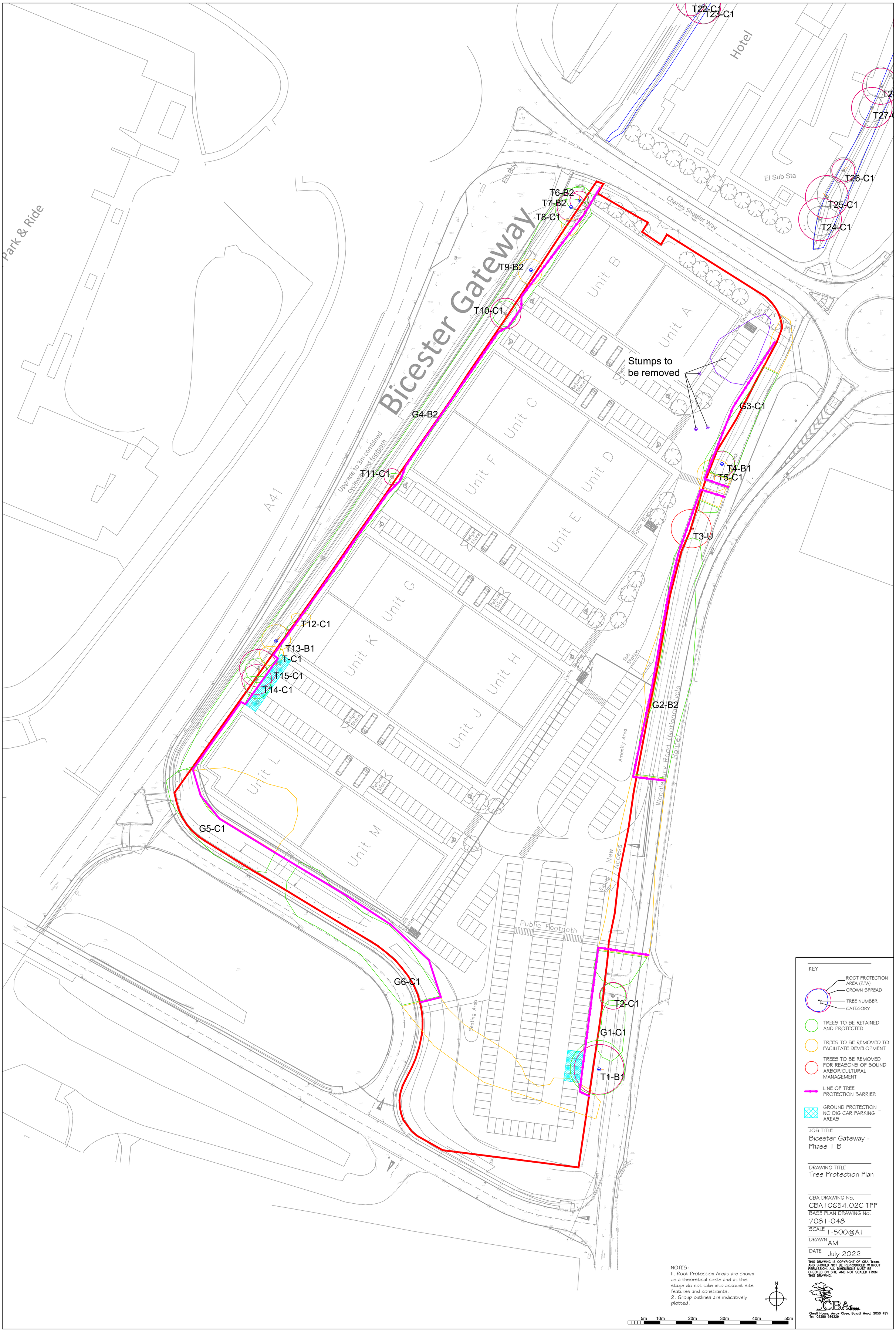
SCALE :	DATE :
1 : 500 @ A0	26/09/2016
MAP FILENAME :	**BASE PLAN:**
CBA10654.01 TSP	1206

NOTES:
1. Root Protection Areas are shown as a theoretical circle and at this stage do not take into account site features and constraints.
2. Group outlines are indicatively plotted.

- ROOT PROTECTION AREA
- CROWN SPREAD
- CATEGORY 'B'
- CATEGORY 'C'
- CATEGORY 'U'



CB3



NOTES:
1. Root Protection Areas are shown as a theoretical circle and at this stage do not take into account site features and constraints.
2. Group outlines are indicatively plotted.

KEY

- ROOT PROTECTION AREA (RPA)
- CROWN SPREAD
- TREE NUMBER
- CATEGORY
- TREES TO BE RETAINED AND PROTECTED
- TREES TO BE REMOVED TO FACILITATE DEVELOPMENT
- TREES TO BE REMOVED FOR REASONS OF SOUND ARBORICULTURAL MANAGEMENT
- LINE OF TREE PROTECTION BARRIER
- GROUND PROTECTION _ NO DIG CAR PARKING AREAS

JOB TITLE
Bicester Gateway - Phase 1 B

DRAWING TITLE
Tree Protection Plan

CBA DRAWING No.
CBA10654.02C TPP

BASE PLAN DRAWING No.
7081-048

SCALE 1-500@A1

DRAWN AM

DATE July 2022

CBA Trees.
Chesil House, Arrow Close, Boyatt Wood, SO50 4SY
Tel: 02380 986229

CB4

	TREE WORKS SCHEDULE	
	Site:	Bicester Gateway – Phase 1B
	Date:	Bicester Gateway Ltd
	Consultant:	Stefan Rose *BSc (Hons), TechCert (Arbor.A)*

Tree No	Species	Recommended Works
T1	Ash *Fraxinus excelsior*	None required
T2	Goat Willow *Salix caprea*	None required
T3	Ash *Fraxinus excelsior*	Fell to ground level
T4	Ash *Fraxinus excelsior*	None required
T5	Ash *Fraxinus excelsior*	Fell to ground level
T6	Ash *Fraxinus excelsior*	Reduce lateral branch spread on eastern side to provide 1.5m separation from building
T7	Ash *Fraxinus excelsior*	Reduce lateral branch spread on eastern side to provide 1.5m separation from building
T8	Ash *Fraxinus excelsior*	Fell to ground level
T9	Ash *Fraxinus excelsior*	Fell to ground level
T10	Ash *Fraxinus excelsior*	None required
T11	Pedunculate Oak *Quercus robur*	None required
T12	Pedunculate Oak *Quercus robur*	Fell to ground level
T13	Pedunculate Oak *Quercus robur*	Fell to ground level
T14	Pedunculate Oak *Quercus robur*	Crown lift on eastern side to provide 3.5m ground level clearance over parking area
T15	Ash *Fraxinus excelsior*	Crown lift on eastern side to provide 3.5m ground level clearance over parking area
G1	Ash Field Maple Hawthorn	None required
G2	Field Maple Dogwood Hawthorn Blackthorn Goat Willow Crab Apple Elder	Remove sections of group as shown on Tree Protection Plan CBA10654.02C TPP

Tree No	Species	Recommended Works
G3	Hawthorn Goat Willow	Remove sections of group as shown on Tree Protection Plan CBA10654.02C TPP
G4	Field Maple Dogwood Hawthorn Blackthorn Goat Willow Crab Apple	Clip and reduce eastern side of trees as required to provide 1.5m separation from proposed built form
G5	Various species	Remove section of group as shown on Tree Protection Plan CBA10654.02C TPP
G6	Various species	Remove section of group as shown on Tree Protection Plan CBA10654.02C TPP

- All tree works are advised to be carried out between July and September or November and February. Tree works should also avoid the season for nesting birds.

- All tree works should be carried out in accordance with current best practice guidelines and BS3998:2010 – Tree Work Recommendations.

- We recommend the use of an Arboricultural Association Approved Contractor or an ISA Certified Arborist/Tree Worker that is suitably insured and experienced to carry out the tree works.

CB5

SUMMARY OF

TREE PROTECTION MEASURES

Introduction

This leaflet shall be issued to all site personnel as part of their induction briefing.

It describes in summary form, the precautions that site personnel shall at all times follow, to ensure that the existing trees on the site come to no harm.

The precautions described are neither arbitrary nor reducible and must be adhered to in full.

These precautions are necessary because unprotected trees are very vulnerable to damage during demolition and construction works.

Furthermore, many of the trees on the site are under LEGAL PROTECTION and damaging them can result in heavy fines.

Two common misconceptions about trees:

MYTH: Trees have deep taproots and so shallow excavations will not harm the tree.
FACT: 90% of all tree's roots are found in the top 600mm of soil; all excavations near to trees are likely to cause root damage which can kill the tree.
MYTH: Trees will quickly heal over any bark wound, with no ill effect.
FACT: Bark wounds take years to heal and larger ones never do; missing bark can lead to disease and even the death of the tree.

Tree Protection

All trees adjacent to unsupervised work areas have been protected by fencing.

This fencing must be respected at all times and no attempts shall be made to damage, bypass or ignore it.

In areas designated for supervised working, no works shall be undertaken without the supervisor being present or without him/her issuing a "carry on" chit.

Prohibitions Adjacent to Trees

Inside the exclusion area of the tree protection, the following prohibitions shall apply.

- No digging or scraping
- No storage of plant or materials
- No vehicular access
- No fire lighting
- No handling, discharge or spillage or any chemical substance
- No water-logging

In addition to the above, further precautions shall be taken near to trees.

- A 10m separation distance shall be observed between trees and any substance injurious to their health, including fuels, oil, bitumen, cement (including washings) builders' sand, concrete mixing and other chemicals.

- No fire shall be lit such that flames come within 5m of any foliage; this shall be taken to mean a fire separation distance to the leaves of 20m.

Avoiding Damage to Stem and Branches

Care shall be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights, can operate without coming into contact with trees.

Consequently, any transit or traverse of plant in proximity to trees shall be conducted under the supervision of a spotter to ensure that adequate clearance is at all times maintained.

In some circumstances, it may be impossible to achieve this, necessitating the pruning of the tree.

If this is necessary, a specialist team shall be called in following referral to the project Arboriculturist.

No tree pruning shall be undertaken by demolition or construction personnel.

Asking for Help

If you see any damage to a tree or its protective fencing, or if you need a tree pruning for plant clearance, contact **CBA Trees** as follows:

Office Telephone: 02380 986229

REMEMBER:
ALL TREE DAMAGE IS AVOIDABLE – SO AVOID IT!

**PROTECTIVE BARRIERS.
THESE BARRIERS MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.**

TREE PROTECTION AREA

KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990)

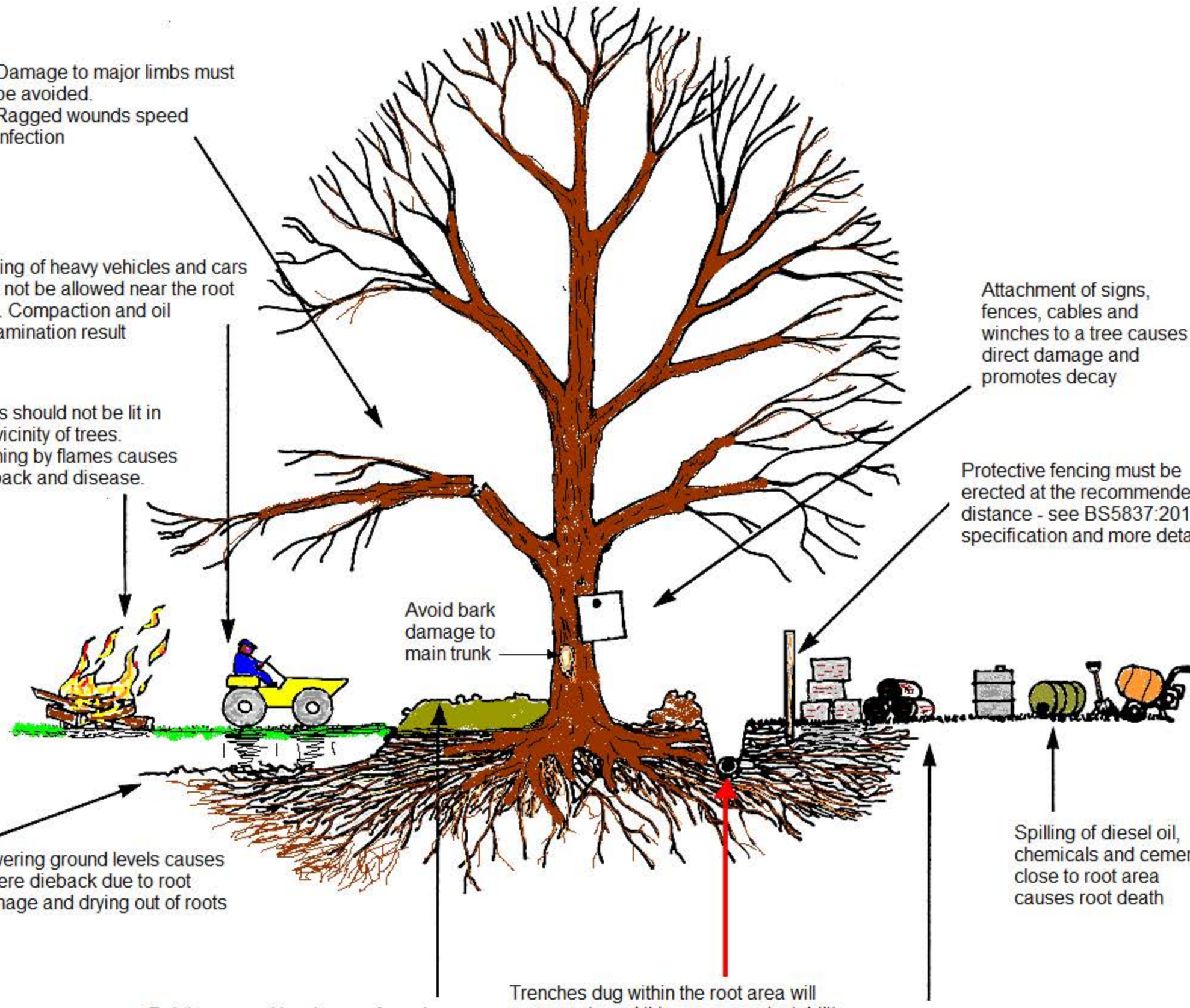
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.

CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

COMMON CAUSES OF TREE DEATH

The use of properly positioned protective barriers can prevent tree deaths occurring.



CB6

The Professional Arboricultural Consultancy

Qualifications of
Stefan Rose
Principal Consultant

Stefan Rose *BSc (Hons), TechCert (Arbor.A), TechArbor.A,* joined CBA Trees in 1998 as a junior surveyor and having gained extensive knowledge and a wealth of experience over the years including Professional Tree Inspectors Certification (LANTRA), has progressed to Principal Consultant. He has considerable experience in working as a locum for Local Authorities, assessing new and extant Tree Preservation Orders, and continues to work on a number of major development projects nationwide.

As our Principal Consultant Stefan undertakes a full range of arboricultural services from health and safety audits to BS5837:2012 tree surveys, providing expert advice and guidance on initial feasibility site assessments to full scale planning applications. He is accomplished at producing implication assessments and method statements for the submission of planning applications, working with both individual home owners and within multi-disciplinary teams to achieve successful arboricultural outcomes.